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Effects of Differentiated Instruction on Students' Empowered Learning Skills

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Education policymakers and teachers' roles are vital in providing an environment that empowers learners. In a classroom, each learner has different learning profiles and in such an environment, a one-size-fits-all teaching method is ineffective. Given this context, this randomised controlled experimental study aimed at measuring the effect of differentiated instructional strategy as a pedagogy on students' empowered learning skills. This study developed and standardised an intervention module of 16 lesson plans on English grammar and poetry integrating essential components of empowered learning into differentiated instruction. Randomly selected 100 students of standard 9, boys and girls, from an English medium ICSE school in the urban district of Bangalore comprised the samples. The researcher implemented the intervention on differentiated instruction for 3 months. This research employed control and experimental groups and pre-test and post-test designs. The quantitative data were collected through a measuring tool. Data analysis of the pre and post-test scores of the experiment group underscores a significant impact of differentiated instruction on the empowered learning skills of students. This study significantly contributes to augmenting traditional teaching methods with differentiated instruction, particularly in the Indian context. The findings of this study help teachers in a mixed-ability classroom to consider individual differences, provide a wide range of choices for students and treat both gifted students and students with poor abilities equally. Besides, teacher training institutions and special educators can integrate differentiated instructional strategies in their curricula to help potential teachers develop the rubrics of differentiation and make individualised plans for each student as per the special needs of the students and empower them.

Keywords: differentiation, empowerment, instruction, learning, learning skills

INTRODUCTION

Instruction is a thoughtful effort to organise an educational environment to promote learning. (Ginja & Chen, 2020). Researchers agree that the one-size-fits-all approach is against effective education and educational programs must respect the instructional needs and the intellectual and psychological diversity of the student (Evans et al., 2021). Because every learner is unique, the differences in the learning profile and speed of learning must be considered for better learning outcomes (Suwastini et al., 2021). Respecting this wide diversity of student needs and interests, school administrators and

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teachers need to implement a pedagogy that fits all rather than expecting learners to adjust themselves to the teaching methods (Tomlinson, 2000). To address this problem, Tomlinson (2005), a leading exponent of differentiated instruction conceptualised students' readiness level, interest and learning profile as the basis of differentiation. While using differentiated teaching, the teacher facilitates unique ways to teach each learner based on their specific needs by engaging in different teaching methods flexibly. Since differentiation is derived from multiple intelligences and cooperative learning theories, it offers a suitable educational atmosphere through its diverse teaching-learning activities (Alhamuddin, et al., 2023). A classroom is a collection of highly diverse learners where teachers are challenged to respect the student's diversity of interests, readiness levels, learning preferences, cultural backgrounds and intelligence (Pozas et al., 2023).

In a classroom situation, differentiated instruction denotes a philosophy wherein a teacher plans her lessons systematically to accommodate all the learners as one size does not fit all (Gregory, 2013). The diverse nature of students' learning profiles makes it a necessity for educationists to develop learning strategies to cater to the needs of all students as one size does not fit all. In this context, many educators consider differentiated instruction as a suitable approach that proposes to restructure the content and management of the classroom for the benefit of all (Subban, 2006). When students' fundamental interests and differences are addressed, they become more motivated and stay positive. Besides the general demographic features of gender, age and ethnicity, students also have differences in intelligence, learning profile and personality characteristics (Nicholas et al., 2024). Differentiated Instructional method addresses individual learning needs and enhances learning opportunities. Although initially developed for gifted students, it has advanced into a method being used even in mixed-ability classrooms. This method is highly used and endorsed by educators as it meets the learning needs of both advanced and struggling learners in mixed-ability classrooms by differentiating the content, process and product based on students' readiness, interests and learning profiles (Gheyssens et al.,2022).

The work efficiency of teachers regulates the quality of education and their direct involvement with students empowers them (Utami & Vioreza, 2021). Empowering students and the development of character go hand in hand. In this sense, the empowerment process nurtures characters in individuals and communities (Dobson & Dobson, 2021). Empowerment is a process whereby an individual can make the most of the opportunities despite the constraints faced. In this process, people develop awareness of their interests and potential and be a part of the decision-making process. Shand-Baptiste (2020) argues that it is imperative to challenge the current scenario of social relations with innovative character curricula that empower students to speak out, collaborate and realise their innate skills. When an external force makes a forceful attempt to empower it becomes control. The feeling of empowerment is an internal state of mind experienced by an individual like the way one experiences other feelings such as anxiety and motivation (Frymier et al., 1996).

LITERATURE REVIEW

This review has enabled the researcher to find the research gap and the need for the study in the specific area of this study. To give a wider range to the review, a series of recent and older studies have been included here. An ever-increasing body of literature shows considerably growing interest of researchers in the general trends of empowered learning and differentiated instruction.

Differentiated Instructional Strategy

Despite the education system responding to diversity among students, student diversity, globally, is considerably increasing (Pozas et al., 2020). Grecu (2023) explored the experience and perception of teachers in differentiating language art modules to provide equitable opportunities for learning for students. The data were thematically analysed through focus group discussions and in-depth semi-structured interviews. The interview consisted of three sections; (1) participants' backgrounds, (2) classroom composition, teachers' perception of themselves, teachers' philosophy of education and their views on curriculum and (3) participants' experience with study phenomena. The study found that curricular resources based on differentiating instruction may appear challenging but it is necessary and possible. Melesse and Belay (2022) investigated the correlation between student attributes, such as background knowledge, readiness, interests, and learning profiles and the utilisation of differentiated instruction (DI) elements by teachers. The study confirmed that there is a direct association between the variations in students' qualities and the differentiation of content and learning environments.

Rizalda (2022) examined the impact of employing a differentiated instructional method on the learning outcomes of grade 8 students in the field of science. A quasi-experimental research method was employed to assess the outcomes of students in two distinct parts of Grade 8 science. The implementation of differentiated instruction, namely in the areas of content, process, and product, has a positive influence on students' academic attainment in the field of science. Magableh and Abdullah (2021) examined the effects of differentiated instruction on the acquisition of reading comprehension skills in classes with students of varying abilities. The study followed an explanatory sequential quasi-experimental design. The study had 54 tenth-grade students from two separate classrooms at two distinct schools. The findings of the study showed that the implementation of differentiation had a positive effect on the improvement of reading comprehension achievement among students in the early secondary stage.

Ozdemir and Bostan (2021) analysed the features and the design of differentiated activities specifically tailored for mathematically talented pupils. The design method employed preparatory and prototyping phases as a fundamental outline to uncover these qualities as design principles. The data acquired via qualitative research methods yielded three distinct categories: initial design principles, which are characteristics received during the preliminary phase; adjustments for tasks; and final design principles, which are characteristics collected during the prototyping phase.

Empowered Learning

To empower the language skills of students through learning videos, Rahmawati et al. (2023) found a positive effect of teachers' videos on students' language learning skills. This case study which used a questionnaire and interview methods observed and collected data from 32 participants which included 2 teachers. The study concludes that students' language learning empowerment can be enhanced by learning videos. Asmoro's (2021) quasi-experimental study on guided inquiry and students' scientific thinking empowerment shows that guided inquiry enhances students' scientific thinking skills. Based on Kuhn's indicators of scientific thinking skills, 263 eleventh-grade students from Indonesia were included in this study. The study found that if students perform scientific thinking activities correctly, their scientific thinking skills can be empowered through the use of guided inquiry learning.

A longitudinal case study by Jiang et al. (2020) examined the involvement of a student from a Chinese ethnic minority background in a digital multimodal composing (DMC) project. The study investigated the influence of this project on the student's engagement and commitment to learning English as a foreign language (EFL). It emphasises the need to recognise the significance of multimodality and relevant literacy practices in empowering ethnic minority students to overcome linguistic and digital barriers in mainstream educational settings. Tsai et al. (2020) investigated how staff and students in a UK university perceive agency, equality and transparency in current data practices and opportunities for learning analytics. This research had 6 student focus groups with 5 participants each. Semi-structured focus group interviews that lasted about an hour each were conducted. This study demonstrates that learner empowerment shouldn't always be taken for granted as a result of the implementation of learning analytics.

Theoretical Framework

Educational organisations worldwide are confronted with the major barrier of including all children in schools (Gaitas et al., 2024). Tomlinson (2005) terms Differentiated Instruction as multiple classroom practices which accommodate students' differences in interests, styles of learning, previous knowledge, needs, and comfort zones. Its focus is on balancing the content to be delivered and the competencies of the students by applying different pedagogical methods. The basic principles of differentiated instruction are students' choice, multiple teaching and learning styles, collegiality, student talk, open-mindedness, variety in assessment and connection to experience (Benjamin, 2002). Differentiated instruction is governed by the principles of a flexible classroom, effective ongoing assessment, flexible grouping, respectful activities and collaboration between teacher and students. Content, process and product are the elements of the curriculum where a teacher can make differentiation (Tomlinson, 2000).

Content- Content is what is taught and while differentiating content, teachers choose a specific part of the curriculum suitable for their students based on student readiness, interest, and learning preferences (Hamdache, 2022).

Process- Process pertains to the methods students use to engage in, understand, and retain knowledge. To differentiate the process teachers, need to employ approaches

such as utilising multiple intelligences, creating interest groups, giving complex instruction, and ensuring concept attainment and independent study (Suryati & Ratih, 2024).

Product - Product is a stage that allows students to exhibit their understanding and knowledge through many evaluative methods such as reports, exams, and interviews. This is a vital stage to evaluate students' learning outcomes. Differentiation in the production of student work allows the usage of several options such as debates, presentations, and experiments that foster an all-inclusive evaluation of student learning (Blaz, 2022)

Culturally the concept of empowerment is perceived differently such as the freedom to choose and make independent decisions, the ability to get things done, organise resources and accomplish one's objectives (Saleh, 2022). In the context of school, empowered students have high motivation to do any task (Thomas & Velthouse, 1990. Motivation, guidance and freedom from the mentor lead a student to learn responsibly where he or she becomes more active in learning rather than merely remaining a trainee, which, eventually leads the learner to feel empowered (Hase & Kenyon, 2013). A motive stimulates an individual to act in a particular manner or develop a tendency towards a definite behaviour to gratify basic needs or wants (Acquah, 2021). Empowerment leads an individual to obtain self-confidence, a sense of purpose in life and the ability to make the right decisions. From a cognitive point of view, Thomas and Velthouse (1990) define empowerment as increased inherent motivation to do any task. The fundamental idea of this model is a continuous cycle of environmental events and assessment of tasks and behaviour. Empowerment is based on four task assessments, i.e., meaningfulness, competence, impact and choice.

Meaningfulness is the degree to which a person experiences his activity as generally valuable, meaningful and worthwhile. According to Aguinis and Glavas (2019), for some people, fulfilling goals related to their activity or employment stability makes their lives more meaningful. Others define meaningfulness as a calling orientation, which involves improving the world. Meaningfulness is largely measured through the objectives that one accomplishes (Nazir et al., 2021). Competence is defined as a set of integrated capabilities that are necessary for sustained effective performance including problem-solving, implementing innovation and bringing about transformation in a particular context, profession, organisation, job, role and situation. Competence comprises content-related clusters of knowledge, skills, and attitudes (Aguinis & Glavas, 2019).

The word Impact denotes the range to which actions are supposed to effect a change in terms of attaining the purpose, i.e., creating an anticipated effect in one's task setting. It carries significant psychological meaning, evoking notions of influence, power and change and represents the ability to make a lasting impression or effect on someone or something (Thomas & Velthouse,1990). Deci and Ryan (1985) noted that choice results in higher adaptability, initiative, creativity, resilience and self-control. On the other hand, when a person feels as though circumstances are in control of them, tension, a

negative emotional tone and low self-esteem result. Making a choice is frequently challenging and time-consuming.

The Need for the Study

Several researchers have explored the characteristics, dimensions, relevance, and advantages of differentiated instruction (Dixon et al., 2014; Harju & Niemi, 2020; Liang et al., 2020; Maulana et al.,2020; Rock et al., 2008; Taylor, 2015). While a lot has been studied about theory, there is scanty evidence of empirical validation to establish the effect of differentiated instruction of teachers on the empowered learning of students. This is due to the over-emphasis on traditional methods of teaching, lack of knowledge of differentiated instruction, or lack of competence on the part of the teachers (Onyishi & Sefotho, 2020). Identifying this research gap, the researchers found it appropriate to conduct this study to examine the influence of in-service teachers' differentiated instructional strategy on students' empowered learning skills in the Indian context. The findings of the study can be beneficial for different stakeholders of education. Closing this research gap could provide valuable insights for educators and instructional designers on how to design differentiated instructional strategies to enhance students' empowered learning.

Hypotheses of the Study

The influence of differentiated instruction on students' empowered learning was measured and analysed based on the following three hypotheses:

Ho 1 - There is no significant difference in the mean pre-test and post-test scores of meaningfulness, competence, impact and choice of students under the control group.

Ho 2 - There is no significant difference in the mean pre-test and post-test scores of meaningfulness, competence, impact and choice of students under the experimental group.

Ho 3- There is no significant difference in the mean post-test scores of empowered learning between the control and experimental groups.

METHOD

The methodology section covers the detailed approaches used in carrying out this study. This includes particulars of the study design, sample design and size, intervention module, measuring instrument, description of the procedure of the study and ethical considerations.

Research Design

This study employed a quantitative method to realise the objectives and test the study's hypotheses. The design of the study is experimental with two randomised groups: (1) control (n=50) and (2) experiment (n=50). This study examined two measurement points: pre-test and post-test. The experimental group received differentiated instruction, whereas the control group was not exposed to it.

Sampling Desing and Size

The study used a randomised sampling method. The randomly selected sample represents the population as its selection is unbiased due to the non-involvement of the researcher in the selection process. The best cause-effect relation between the variables can be achieved by randomising the experiment (Miller et al., 2020). The population of the study comprised all the students of standard 9, in the Bangalore urban district, Karnataka, India. The population covered students of the entire residential and non-residential English medium high schools in Bangalore urban district irrespective of the different syllabi. The sample consisted of 100 students. The participants were from an urban non-residential school. They were from middle-income families and represented various religious and demographic features. The participants were randomly allocated to either the experimental or the control group using a lottery method, with 50 in each group and 25 boys and 25 girls in each group. The mean age of the participants is 15 years and the standard deviation is 1 year. The experiment was conducted in a single school.

Although randomisation ensures the equivalence of the two groups, additionally an independent t-test was conducted on the first-term academic test scores of the control and experimental groups to establish the equivalence. The first-term academic test is a written test that both the control and experiment groups attended before the experiment began in the second term of the academic year. As shown in Table 1, it is observed from the t-test result that there is no significant difference in mean first-term academic test scores between the control and experimental groups. (t=0.213, p=0.832) at 5% level of significance. In other words, there is no significant difference in the mean first-term academic test scores of students in the control group and experimental group. It established a comparable starting condition.

Table 1
Result of the t-test of the first term academic test scores of students in the control and experiment group

Test	Group	N	Mean	d.f	Std.Error	*t*-value	*p*-value
First-term	Control	50	18.21	98	0.805	0.213	0.832
Academic Test	Experimental	50	17.98		0.721		

Intervention Module

The researcher developed a module on differentiated instruction with 16 lesson plans on the English language and poetry. This module is developed based on The Differentiated classroom theory propounded by Tomlinson (2005), the Psychological Empowerment theory of Thomas and Velthouse (1990) and the Learning outcomes envisaged by NCERT (2019). The module was evaluated and modified with the help of three experienced high school teachers and two trained and experienced educational psychologists. The suggestions of the experts were included in the module. The instructional module was piloted among 25 students of 9^{th} grade who were not part of the actual sample of the study. The module of lesson plans contains the lesson's objectives, teaching strategy used, indicators of differentiation, class activities, resources used and earning outcomes. The module specifies teacher activities on

differentiated instruction and empowered learning students' responses and a detailed learning outcome.

Measuring Instrument

This study adopted the Learner empowerment measure developed by Frymier et al. (1996). The researcher obtained permission from the authors to use and culturally adapt the tool. This measure was tested on 470 undergraduate students of a mid-western university during the first study. To refine it, a second study was conducted on 340 students of the same university. Responses to 30 items to measure learner empowerment were submitted to factor analysis. Factor structure was determined by Promax oblique rotation. The final version of this measure with the Likert scale has four factors with alpha reliability scores: impact .95, meaningfulness .92, competence .92 and choice .89. Construct validity was established using the Pearson correlation coefficient. The tool was culturally adapted and validated by five experts from the specific area. The items were distributed across four constructs in the manner, Competence (n=7), Meaningfulness (n=8), Impact (n=7) and Choice (n=8). The items were responded to on a Likert-type scale with 0= never and 4= very often format.

The Procedure of the Study

Phase I – A request letter containing the details of the study was given to the heads of a few schools. Upon receiving a reply of consent from a few schools, the researcher used a lottery system to finalise the school where the experiment was conducted. The researcher, then, with the consent of the head of the school met the students of standard 9 and briefly explained to them the procedure, purpose, requirement, duration and ethical consideration of the proposed study. A letter of assent from students was also taken in a form. After using the inclusion and exclusion 100 students were selected. The participants were then randomly allocated to either the experimental group or the control group using a lottery method, 50 in each group with 25 boys and 25 girls in each group. This was followed by a pre-test.

Phase II- The experimental group was given the intervention of differentiated instruction. The control group was not exposed to the intervention. The intervention consisted of 16 periods of the teaching of the English language and poetry, in a span of 12 weeks during school hours and time permitted by the head of the school. Differentiation was made in the process, content and product of the subject matter to be delivered. The researcher himself implemented the intervention. The control group was taught the same lesson in the traditional method for the same duration by the researcher. The differentiated instructional module integrated essential components of empowered learning of students.

Ethical Considerations

This study was carried out following certain ethical principles. Informed consent from the head of the institution and assent from the participants and their parents or guardians was collected. The participants were appraised concisely about the entire details of the study such as the purpose, benefits, risk, design, the time required for the study and the implications of being part of the study. The participants were guaranteed the privacy of

their identity and the information they shared while filling out the questionnaires. It was made known to the participants that they had the freedom to withdraw from the study at any point in time. During the intervention, the cultural and religious feelings of the participants were respected and unbiased language was used. The researcher took maximum care to avoid plagiarism and fabricating evidence, data results and conclusion of the study.

Data Collection and Analysis

The questionnaire on learner empowerment collected the data in pre- and post-intervention phases from both the control and experimental groups. The items on the questionnaire were responded to on a Likert-type scale with 0= never and 4= very often format. The gathered data were recorded and analysed utilising descriptive and inferential statistics through SPSS. The nature of the distribution of scores was identified using descriptive statistical techniques such as mean, median and standard deviation. The skewness of the distribution and kurtosis co-efficiency were identified.

Normality Tests

Table 2
Frequency distributions of pre-test empowered learning scores of students under control and experimental group

Class-interval	Control	%	Experimental	%
<49	3	6	0	0
50-59	9	18	6	12
60-69	18	36	15	30
70-79	14	28	11	22
80-89	5	10	12	24
90-99	1	2	5	10
>100	0	0	1	2
Total	50	100	50	100

As shown in Table 2, the mean distribution of pre-test empowered learning scores under the control group is 66.5 and its standard deviation is 11.3303. The median of the distribution is 67. The skewness of the distribution is 0.056 and kurtosis is 0.476 and its curve is normal. The normality criterion is the value of the Shapiro-Wilk test p=0.783 and the Kolmogorov-Smirnov test p=0.2. Both the p values are higher than 0.05, therefore the distribution is assumed to be normal. Hence the pre-test empowered learning scores of 50 students under the control group follow a normal distribution. Since the data showed normal distribution, a parametric test was used.

For pre-test empowered learning scores under the experimental group, the mean of the distribution is 73.62 and its standard deviation is 12.113. The median of the distribution is 73.5. The skewness of the distribution is 0.172 and kurtosis is -0.44 and its curve is almost normal. The normality criterion is the value of the Shapiro-Wilk test p=0.744 and the Kolmogorov-Smirnov test p=0.2. Both the p-values are higher than 0.05, therefore the distribution is assumed to be normal. Hence the pre-test empowered

learning scores of 50 students in the experimental group also follow a normal distribution. Since the data showed normal distribution, a parametric test was used.

Table 3
Frequency distributions of post-test empowered learning scores of students under control and experimental group

Class-interval	Control	%	Experimental	%
<49	3	6	0	0
50-59	11	22	0	0
60-69	22	44	1	2
70-79	12	24	8	16
80-89	2	4	35	70
90-99	0	0	6	12
>100	0	0	0	0
Total	50		50	

Note. < & > are open-end classes.

As shown in Table 3, the mean distribution of the post-test empowered learning scores under the control group is 65.28 and its standard deviation is 9.531. The median of the distribution is 67.5. The skewness of the distribution is -0.159, kurtosis is -0.116 and its curve is normal. The normality criterion is the value of the Shapiro-Wilk test p=0.454 and Kolmogorov-Smirnov test p=0.03, Shapiro-Wilk test p values are higher than 0.05, therefore the distribution is assumed to be normal. Hence the post-test empowered learning scores of 50 students under the control group follow a normal distribution.

For the post-test empowered learning scores under the experimental group, the mean of the distribution is 84 and its standard deviation is 5.76. The median of the distribution is 84. The skewness of the distribution is -0.806, the kurtosis is 2.464 and its curve is normal. The normality criterion is the value of the Shapiro-Wilk test p=0.058 and Kolmogorov-Smirnov test p=0.2, both the p values are higher than 0.05, therefore the distribution is assumed to be normal. Hence the post-test empowered learning scores of 50 students in the experimental group follow a normal distribution.

FINDINGS

This study aimed to test 3 hypotheses. Inferential statistics, i.e., sample *t*-test was employed to measure the significant difference in the pre-test and post-test mean and standard deviation and to find the *t*-value and *p*-value. Based on the findings of the *t*-test the hypothesis was either accepted or rejected.

Ho 1 There is no significant difference in the mean pre-test and post-test scores of meaningfulness, competence, impact and choice of students under the control group.

Table 4
Results of independent t-test of pre and post-test of meaningfulness, competence, impact and choice scores of students under the control group

Control group	Test	N	Mean	D.f	Std.Error	*t*-value	*p*-value
Meaningfulness	Pre-test	50	18.5600	98	0.62411	0.308	0.759
	Post-test	50	18.2800		0.66212		
Competence	Pre-test	50	15.3400		0.44686		
	Post-test	50	14.8800	98	0.39758	0.769	0.444
Impact	Pre-test	50	15.3400		0.55667		
	Post-test	50	15.1800	98	0.55820	0.203	0.840
Choice	Pre-test	50	17.2600		0.46053		
	Post-test	50	16.9400	98	0.39837	0.526	0.600
Total Empowered Learning	Pre-test	50	66.50		1.6023		
	Post-test	50	65.28	98	1.3480	0.583	0.561

It is observed from the above *t*-test result table 4 that there is no significant difference in mean Meaningfulness scores of pre and post-test ($t(98)$= 0.308, p=0.759) at 5% level of significance; Competence scores of pre and post-test ($t(98)$= 0.769, p=0.444) at 5% level significance; Impact scores of pre and post-test ($t(98)$= 0.203, p=0.840) at 5% level of significance; Choice scores of pre and post-test. ($t(98)$= 0.526, p=0.600) at 5% level of significance with respect to students under the control group. It is observed from the above *t*-test result that there is no significant difference in mean overall empowered learning scores of pre and post-test ($t(98)$= 0.583, p=0.561) at 5% level of significance with respect to the students under the control group.

Hence the null hypothesis is accepted. In other words, the mean pre-test and post-test empowered learning scores do not differ significantly (statistically) in the control group. The result of the *t*-test of Hypothesis 1 indicates that the empowered learning skills of the participants in the control group did not differ as they were not exposed to the intervention on differentiated instruction.

Ho 2 There is no significant difference in the mean pre-test and post-test scores of meaningfulness, competence, impact and choice of students under the experimental group.

Table 5
Results of independent t-test of pre and post-test of meaningfulness, competence, impact and choice scores of students under the experimental group

Experimental group	Test	N	Mean	D.f	std.error	*t*-value	*p*-value
Meaningfulness	Pre-test	50	20.6400	98	0.60323	-4.233	0.000
	Post-test	50	23.4400		0.27129		
Competence	Pre-test	50	18.3000		0.43448		
	Post-test	50	20.0600	98	0.26865	-3.445	0.001
Impact	Pre-test	50	16.8800		0.53653		
	Post-test	50	19.5000	98	0.28749	-4.304	0.000
Choice	Pre-test	50	17.8000		0.51587		
	Post-test	50	21.0000	98	0.37688	-5.009	0.000
Total Empowered Learning	Pre-test	50	73.62	98	1.7130	-5.472	0.000
	Post-test	50	84.00		0.8146		

It is observed from the above *t*-test result table 4 that there is a significant difference in mean meaningfulness scores of pre and post-test (*t(98)*= -4.233, *p*=0.000) at 5% level of significance; Competence scores of pre and post-test (*t(98)*= -3.445, *p*=0.001) at 5% level of significance; Impact scores of pre and post-test *(t(98)*= -4.304, *p=0.000*) at 5% level of significance; Choice scores of pre and post-test (*t(98)*= -5.009, *p*=0.000) at 5% level of significance with respect to students in the experimental group. Hence the null hypothesis is rejected. In other words, the mean pre-test and post-test choice scores differ significantly (statistically) in the experimental group. It is observed from the above *t*-test result that there is a significant difference in mean overall empowered learning scores of pre and post-test (*t(98)*= -5.472, *p*=0.000) at 5% level of significance with respect to the students under the experimental group.

Hence the null hypothesis is rejected. In other words, the mean pre-test and post-test empowered learning scores differ significantly (statistically) in the experimental group. The result of the *t*-test of Hypothesis 2 indicates that empowered learning intervention led to a real, measurable change in the experimental group's scores, which is statistically significant. Therefore, it can be concluded that the intervention had a positive effect on the learning outcomes of the participants in the experimental group.

Ho 3 There is no significant difference in the mean post-test scores of empowered learning between the control and experimental groups.

Table 7
Results of independent t-test of post-test empowered learning scores in the control experimental group

Post-test	Test	N	Mean	D.f	Std.Error	t-value	p-value
Empowered Learning	Control group	50	65.28	98	1.348	-13.81	0.000*
	Experimental group	50	84.00		0.814		

Note. * Means there are more decimal values.

It is observed from the above t-test result table 4 that there is a significant difference in mean post-test empowered learning scores between control group and experimental group. (t(98)= -13.81, p=0.000*) at 5% level of significance. Hence the null hypothesis is rejected. The result of the *t*-test of Hypothesis 3 indicates that the empowered learning intervention worked to improve the learning scores of those who participated in it, as evidenced by their significantly better performance on the post-test compared to the control group.

DISCUSSION

The researcher found a significant influence of differentiated instructional strategy on the empowered learning of students. Teachers' role in the classroom as a reservoir of knowledge is changing gradually as students' varied needs and learning profiles get more attention (Nisa et al., 2023). In this background, nearly conforming to the study of (Dalila et al., 2022) this study found that differentiated instructional method respects the uniqueness of every student and empowers them. In this student-centred approach, students are allowed to explore themselves wherein teachers play the role of facilitators. Although this method of instruction considers every child unique, the education movement requires to place quality emphasis on teachers' qualifications, balanced personalities, mastery of teaching skills and mastering teaching methods. (Faiz & Faridah, 2022). When differentiated instructional method is employed in the classroom students with different learning profiles feel valued and welcomed, their learning needs are facilitated, fairness in the classroom is maintained and teacher and student collaboration is established which leads to the empowerment of students.

Furthermore, the current study affirms that empowerment is a process by which an individual gains control over one's decisions in life. Students' holistic development and growth vastly depend on the culture of empowerment provided in the educational institution. When empowered students can express their opinions, obtain better grades in academics, exhibit active participation and have better social maturity. Lack of engagement and discouraging learning environments act as barriers to empowerment. Educational institutions need to create an atmosphere in which students feel that they are cared for and their voice is heard. The scope of student empowerment includes sociocultural activities (team activities and sports), and academics (projects, classrooms, etc.). psychological need for autonomy is another factor enhancing student empowerment (Donald & Ford, 2022; Jackson & Bridgstock, 2021).

As identified in this study, the effectiveness of differentiated instruction on learning skills and better learning outcomes has been highlighted in previous research too. (Chakrabarti & Tiwari, 2006; Dalila et al., 2022; El Hadi et al., 2022; Faiz & Faridah, 2022; Grossman et al., 2005; Kember, 2001; Nisa et al., 2023). When the education system focuses mainly on academic achievement (Chakrabarti & Tiwari, 2006), differentiated instruction could be implemented to focus on reflective thinking and empowered learning skills of students. To overcome challenges in education, various methods and solutions have been implemented in every era. Differentiated instructional method empowers all learners to find relevance and meaning in the learning content and activities. Students' learning outcome is influenced by the instructional method used by

the teacher based on students' varying interests and backgrounds (Grossman et al., 2005; Kember, 2001).

The result of the current study is in agreement with the findings of El Hadi et al. (2022) and Heng (2023) that student-centred teaching and learning methods like differentiated instruction are increasingly becoming popular worldwide through educational borrowing. Teachers experienced great success in implementing differentiated instruction by creating a supportive environment for learning, developing a quality curriculum and adequate management of the classroom. When the teachers encountered technological, cultural and political misalignments, they faced difficulty in the usage of assessment and instruction due to student variance. In this study, a significant and positive relationship between differentiated instruction and empowered learning is found. This study found that teachers' method of teaching has a significant effect on empowering students which has been substantiated in the findings of previous literature (Kharade et al., 2017; Zambwa, 2022).

When this study was implemented in the Indian context where the one-size-fits-all method is the most common and convenient method of teaching in a classroom, this study found that differentiated instruction provided the right level of opportunities to students based on their interests, differences in abilities, and preferences which make the most of students' potentials. Applying the method of differentiation, the researcher found it easier to bridge the gap between students in a diverse classroom. Another finding of the research is that it was easier to pay individual attention to each learner while delivering the content and evaluation as differentiated instructional method provided ample choices to the learners.

Another promising finding of this research is that integrating essential components of empowered learning into differentiated instructional method enhanced the empowered learning skills of students. This was evident not only in the analysed result but also when the participants showed signs of being competent and found the tasks assigned meaningful during the intervention. Additionally, this study found that including students in the decision-making, providing larger participation, respecting the autonomy of the participants and providing choices for completion of tasks resulted in the increased empowerment of the learners.

Significance and Contribution to the Field

This study found that differentiated instruction could be implemented in the classroom so that every student emerges as a successful person as the tasks are assigned according to each learner's abilities. Just like every system requires alteration or reformation, in service-teachers could be trained in this method so that they can consider individual differences and needs provide a wide range of choices for students treat both gifted students and students with poor abilities equally and transform them to be reflective thinkers and empowered learners. In tune with the result of this study, teacher training institutions can integrate differentiated instructional strategies in their curricula to help potential teachers develop differentiation skills based on its rubrics, student assessment, classroom management and differentiating curriculum. When these findings of this

study are applied to teachers' education, it prepares the prospective teachers to understand the importance of empowerment in the process of education.

RECOMMENDATIONS

The finding of this study could be applied in special schools as this method provides ample time, many choices and opportunities, scaffold instruction and varied lengths in assignments. Special educators gain benefits from differentiated instruction to make individualised plans for each student as per the special needs of the students. The results of this study can provide education policymakers and administrators with the right understanding of the procedure to develop and implement policies on differentiated instruction to form empowered learners. The finding of the study helps educational administrators to respect and honour the differences in students and to plan policies and supervise instructional programs based on differentiated. This study has tremendous social relevance as developing countries around the world, particularly India, are seriously contemplating a paradigm shift in the area of education.

CONCLUSION

History shows that India has made substantial progress in education in different fields, however, to a certain extent, India hasn't been receptive to adapting or experimenting with different instructional methods. Though there were a few attempts made in this regard, one size fits all and the chalk and talk methods continue to be the most commonly practised methods. As a result, not all but some get the privilege of education. This is due to certain practical reasons such as overcrowded classrooms, economic disparity and lack of readiness to change and adapt.

In this background, the uniqueness of this study is that this research was one of its kind in India where the researcher employed differentiated instruction in a classroom and found that this method was very effective for students to practice reflective thinking skills and become empowered. This study concludes that empowered and reflecting students, by and large, are assets to society who later become responsible and ideal adults. Besides, the differentiated instructional method respects the uniqueness of all the students and provides an equal footing for all to learn and be educated. The researcher strongly recommends that India certainly needs an individualised and reflection-driven method of teaching that leads to empowerment. The study also calls for a re-restructuring of the instructional method from one size fits all to differentiation.

LIMITATIONS AND SUGGESTIONS

The study's participants were from urban backgrounds, which may limit the study's ability to generalise to other backgrounds. Lack of enough consent from schools to allow students to participate in the experiment. Lack of motivation from students for differentiated instruction as they are used to traditional teaching strategies. Ensuring regular attendance of the students for the experimental lessons was a challenge. Future research could be conducted with a larger sample size. A similar study could be done in different populations such as primary school level and university level of education. Research could be undertaken in schools following other syllabi such as SSLC and CBSE. A study can be conducted to integrate differentiated instruction in pre-service

teacher education to train potential teachers. It is suggested to further apply differentiated instruction in other subjects or languages as this study applied differentiated instruction in teaching only the English language and poetry. Future study is suggested to implement differentiated instruction for a longer duration of time with more lessons to explore students' reflective thinking and empowered learning over a longer period.

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